

John C. Stennis Space Center Stennis Space Center, MS 39529-6000

John C. Stennis Space Center Document Preparation, Numbering, and Management

Stennis
Procedural
Requirements

SPR 1400.1

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Expiration Date: April 18, 2011

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Document History Log

Status/Change/ Revision	Change Date	Originator/Phone	Description
Basic	09/15/00	Jimmie Raymond, X3529	Initial Release – Note issued as SPG 1400.1
Basic	10/01/2004	Renay Nelson, x1585	Revalidated per NASA rules review Oct. 2004. Number changed to SPR 1400.1. Document reissued as SPR.
Rev. A	01/05/06	Renay Nelson, X8-1585	Overall rewrite and revision to correct, supplement, and clarify meaning and to comply with requirements of NASA Rules Review. Title revised and changes made throughout document. Specifically affected Paragraphs: P.2, 1.3, 2.1, 2.2.1, 2.2.2.1, 2.2.2.2, 2.3.1, 2.3.2, 3.3.3, 2.4.4, 2.6.5, revised 2.5 and added 2.5.1 Canceling and 2.5.2 Revision Level Notation, 2.6.1, added new 2.6.2 for Contractor Proprietary Notices, 3.4.1 -Table 3-1, 3.4.4, 4.1, 4.2, 4.4, A.1, A.2

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PREFACE

P.1 PURPOSE

- P.1.1 This directive establishes the requirements for preparation and management of SSC documentation. The purpose of this document is to provide the overall instruction necessary to ensure the uniformity, consistency, and general quality of SSC instructional documents and other documentation, and to facilitate its ongoing maintainability, referenceability, and retrieveability.
- P.1.2 This instruction provides specific requirements for numbering, format, maintenance, revision and management of Stennis Policy Directives (SPDs), Stennis Procedural Requirements (SPRs), Stennis Interim Directives (SIDs,) and work processes, procedures and instructions consistent with:
- a. Requirements of NPD 1400.1, Documentation and Promulgation of Internal NASA Requirements and NPR 1400.1, National Aeronautics and Space Administration (NASA) Directives System Procedural Requirements;
- b. Functionality of the SSC Technical Documentation System (TechDoc or TDS) document repository and management system, and
- c. Requirements of NPD 1280.1 NASA Management System Policy and documentation standardization and management practices recommended for quality management programs.
- P.1.3 This directive also provides the general requirements and framework for management and maintenance of other types of SSC documentation housed in TechDoc which provides the overall mechanisms for SSC document and data control.

P.2 APPLICABILITY

- P.2.1 This SPR is applicable to NASA personnel at SSC and to SSC contractors to the extent specified in their respective contracts.
- P.2.2 This instruction is applicable to the preparation, maintenance, and management of SSC instructional, procedural, or reference documentation necessary to achieve the NASA/SSC mission, goals, functions, work objectives, and to ensure continuity of NASA business.
- P.2.3 The procedural requirements provided herein are specifically applicable to the instructional and procedural documentation housed and maintained within the SSC TechDoc System documentation repository. This documentation includes: SPD's, SPR's (previously SPG), SIDs, and work instruction documents such as work processes and procedures,

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maintenance instructions, test procedures, technical procedures, technical standards, etc. It also applies to other types of documentation residing and maintained in the TechDoc System.

- a. In the context of this document, instructional and procedural documentation is defined as that which is specific and/or essential to performance of NASA/SSC functions, services and operations, which describes SSC's prescribed processes, and which shall remain in place and in effect until revised or cancelled regardless of the preparing or performing organization or contractor. Such documentation is considered the property of NASA/SSC and provides for the continuity of NASA/SSC business and operations.
- b. The SSC document format and numbering methodology described herein shall be used on all new procedural and instructional documents as they are prepared, and on legacy documents as they are revised or converted from scanned images to electronic format. SSC personnel are responsible for consulting with the Stennis Document Numbering System (SDNS) administrators for assistance in document conversion and numbering transition activities.
- (1) The format and numbering requirements do not apply to external documents (e.g., accepted industry standards or specifications used by SSC), non-policy, nonprocedural documents of a general reference or other informational nature, or contractor specific corporate/company instructions that may be housed in the TechDoc System. These documents may utilize other appropriate formats. However, to the extent appropriate, any reference, practical, or informational documents (e.g., uniquely generated SSC plans, capability statements, reports, etc.) that may be housed and maintained (revised/updated) in the SSC document repository shall be numbered according to the numbering requirements established herein. External documents will use their associated numbering methodologies or other appropriate scheme as required.
- (2) The format and numbering standards do not apply to any contractor owned documents (corporate or local instructions: i.e., instructions specific to the contractor's corporate policies and site specific internal operating policies or methodologies) that a contractor may choose to house in the SSC TechDoc System. Contractor owned documents include its company policies, processes, and procedures (e.g., vacation, leave, tuition, safety, security, internal job descriptions, or desk processes, etc.) and the internal or organizational management, administrative, and operating instructions that are specific and/or proprietary to the contractor's particular operating processes. This includes Data Requirement (DR) deliverable type documents

Note: If a process or procedure is pertinent and relevant to performance and continuity of NASA business regardless of the performing contractor, the instruction shall be numbered and maintained as a NASA/SSC instruction in accordance with paragraph P.2.3.a and further instructions in this directive.

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- c. Publication in the SSC TechDoc System of contractor-owned/proprietary documents as defined above shall be at the contractor's discretion and the contractor shall be solely responsible for their format, content, document numbering methodology, and maintenance. The contractor shall be responsible for annotation of any such documents as contractor-owned and cancellation at contract end. Use of this instruction for general format and structure may be of value in the preparation of contractor-owned documents, but use of the TechDoc System and maintenance of documents within the system shall be in accordance with the established TechDoc System procedures. Any contractor corporate/company-owned document housed in the SSC TechDoc System shall require some form of "Contractor identification" annotation (see paragraph 2.7.2).
- P.2.4 Requirements of this directive do not apply to the SSC Windchill System, which is the designated repository and management system for engineering documentation.

P.3 AUTHORITY

- a. 42 U.S.C 2473 (c)(1) of the National Aeronautics and Space Act of 1958, as amended.
- b. 40 U.S.C 1401 et seq., The Clinger-Cohen Act (Section 808 of Pub. L. 104-208, renaming in pertinent part the Information Technology Management Reform Act of 1996, Division E of Pub. L.104-106, The National Defense Authorization Act of 1996).
- c. 44 U.S.C 3501 et seq., the Paperwork Reduction Act of 1995, (Pub. L. 104-13), as amended.
- d. 41 CFR, Chapter 101, Subchapter B, Part 101-11, Creation, Maintenance, and Use of Records.
- e. NPD 1280.1, NASA Management System Policy.
- f. NPD 1400.1, Documentation and Promulgation of Internal NASA Requirements.

P.4 REFERENCES

All references are assumed to be the latest version unless otherwise specified.

- a. NPR 1400.1, NASA Directives System Procedural Requirements.
- b. NPR 1441.1, NASA Records Retention Schedules.
- c. NPR 1450.1, NASA Correspondence Management and Communications Standards and Style.
- d. NPR 1600/1, NASA Security Program Procedural Requirements.
- e. SPG 1280.1, John C. Stennis Space Center Management Manual.
- f. SPR 1420.1, John C. Stennis Space Center SSC Forms Management.
- g. SPR 1150.1, John C. Stennis Space Center Establishment of Charters Boards/Councils/Committees

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- h. SPG 8715.1, Stennis Space Center Safety and Health Procedures and Guidelines.
- i. SSC STD 99-008, Guide for the Preparation, Approval and Release of SSC Standards.
- j. SSC Technical Documentation System User's Guides and Instructions
- k. Stennis Document Numbering System (SDNS) User Guidelines.
- 1. SSC Form 738, TechDoc System Documentation Release Checklist.
- m. The Gregg Reference Manual.

P.5 CANCELLATION

SPR 1400.1 Basic

Signature on File

Richard J. Gilbrech, Ph.D. Director

DISTRIBUTION

Approved for public release via NODIS; distribution is unlimited.

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CHAPTER 1. INTRODUCTION

1.1 Background

- a. Stennis Space Center utilizes an ever-growing number of instructional, informational, and reference documents (directives, processes, procedures, work instructions, plans, etc.) to guide the facility's operations and performance of its work objectives. Legacy documentation, developed and manually managed over the years, utilized a variety of formats and numbering methodologies lending to inconsistent document quality, referenceability, retrieveability, and management. Essential knowledge of, and access to, the documents and information was functionally and organizationally fragmented.
- b. Automated electronic data processing, word processing technologies, and database applications now invalidate the traditional paper and manual methods of managing documentation.
- c. To this end, the TechDoc System is designated as the official SSC repository for various information resources as well as the mechanism for document and data control providing uniform access to all of SSC. However, as with any database or documentation management methodology, the quality, validity, and usefulness of the information contained within, and its accessibility to various SSC users, is only as good as the rules, standards, and controls applied to the document's creation, identification, entry, and maintenance processes. This instruction has been prepared to meet these objectives.

1.2 Objectives of Document Standardization

To manage efficiently the necessary information resources required to support SSC operations and performance initiatives, the SSC Chief Information Officer (CIO) established the following objectives and requirements for SSC documentation.

- a. Document numbering shall be standardized to:
- (1) Provide a single uniform system for use by all organizations.
- (2) Facilitate intuitive information or document recognition, identification, and retrieval.
- (3) Provide a common sitewide methodology incorporating built-in intelligence to associate subject areas or functions to accommodate information and records management.
- b. Document formatting for directives and work instructions shall be standardized to:
- (1) Facilitate overall document preparation.
- (2) Provide a universal format for recording and tracking document changes and revisions.

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- (3) Provide uniformity and consistency in content, structure, and presentation.
- (4) Ensure inclusion of essential management elements.
- (5) Support requirements and objectives of the NASA and SSC Management Systems.
- (6) Ensure continuity of SSC operations by precluding undue revisions to essential documentation necessitated by reorganizations or contractor changes.
- c. Document management practices and processes shall be standardized consistent with the functionality and capability of the TechDoc System to:
- (1) Ensure document and content review prior to system entry.
- (2) Properly categorize and associate documents by type of information or instruction to be purveyed.
- (3) Record and track document changes, revisions, and cancellations.
- (4) Minimize or preclude system entry errors by ensuring agreement of document content with system entry information.
- (5) Facilitate information identification, search, and retrieval.
- (6) Facilitate document management and maintenance (review and revision).

1.3 Scope

- 1.3.1 This document provides the requirements for preparation and management of SSC policy, procedural, and work instruction documents. This document also provides the basic framework for management of other types of documentation in the TechDoc System. Chapter 2 and Appendices B and C, respectively, of this document provide procedural requirements and practical guidance for:
 - Format of SPD's, SPR's, work instructions, and the writing and composition thereof.
 - Documentation numbering methodology for all types of SSC documents and the SDNS application.
 - Categorization of documents by Type.
 - Capability, functionality, access, and use of the TechDoc System.
- 1.3.2 This instruction has been prepared to be consistent with applicable elements of NPD 1400.1, Documentation and Promulgation of Internal NASA Requirements, NPR 1400.1, NASA Directives System Procedures and Guidelines; and SPR 1280.1, John C. Stennis Space Center Management Manual. The procedural requirements presented here shall be coordinated with, and used in conjunction with, these documents.

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1.3.3 This document may supersede portions of some other document preparation and management procedures. In case of conflicts, this directive shall take precedence.

1.4 Definitions

Definitions and acronyms are provided in Appendix A to this document.

1.5 Roles and Responsibilities

1.5.1 Center Operations Directorate

- 1.5.1.1 The SSC Center Operations Directorate is delegated the overall responsibility for management and direction to plan, design, construct, operate, and maintain the facilities required for the rocket propulsion systems testing mission as well as technical and institutional facilities to support programs of NASA and other SSC organizations. This includes development and management of an effective Information Technology (IT) program that encompasses management of information resources. The Center Operations Directorate is specifically responsible for:
- a. Providing technical and support services necessary for the accomplishment of missions for NASA and other organizations at SSC.
- b. Developing and managing the Center's overall IT capability and strategic planning in support of NASA including administrative and scientific information systems.
- c. Representing the Center Director on issues related to information technology and information management policy development and implementation.
- d. Planning and administering a comprehensive program for the operation of SSC data systems and the acquisition, utilization, maintenance, and security of information technology.
- e. Planning, developing, managing, operating, and maintaining information system platforms including implementation, operation, and maintenance of the SSC Technical Documentation System and other information resources.
- 1.5.1.2 On behalf of the SSC, the Center Operations Directorate is the Office of Primary Responsibility (OPR) responsible for leading development and maintenance of this document.

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1.5.2 SSC Chief Information Officer (CIO)

- 1.5.2.1 The SSC CIO is the designated Center representative for IT policy development and implementation. The SSC CIO coordinates with the NASA CIO for establishing IT policies and promoting standards and a secure architecture to support scientific, engineering, and administrative data requirements. The CIO is responsible for representing SSC in supporting NASA goals and objectives in the accomplishment of its mission programs through the efficient and cost-effective utilization of IT.
- 1.5.2.2 CIO responsibility encompasses not only the IT resource systems, but the management processes for data and information management. This includes facilitating the dissemination and effective use of the knowledge and information contained within the SSC IT resources.
- 1.5.2.3 The CIO is responsible for ensuring that the objectives of this SPR support the objectives of the SSC Management System and coordinating its implementation activities with the Center Management System Representative and SSC Management Council as needed.

1.5.3 SSC Directives and Records Manager

The SSC Directives and Records Manager is responsible for overall management of the SSC Directives System and SSC Records, and ensuring compliance with NASA directives management requirements for these activities. The Directives and Records Manager is responsible for:

- a. Coordinating the approval process, issuance, and management of SSC Directives and coordinating the assignment of Directives numbers.
- b. Providing oversight direction for development, implementation, and maintenance of the standard document numbering methodology and documentation management systems.
- c. Coordinating the issuance and use of Agency File Scheme (AFS) subject numbers for the standard document numbering methodology, the SDNS, and associated activities for records identification, disposition, and indexing in the SSC Master Records Index (MRI).

Note: All issues regarding directives and records should be coordinated through the Records and Documentation Management Office (RDMO).

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1.5.4 Offices of Primary Responsibility (OPR) – Document Managers and Owners

- 1.5.4.1 Organizations and offices responsible for the preparation, issuance, and maintenance of SSC documentation are responsible for maintaining their instructional and other documentation in accordance with this document.
- 1.5.4.2 Organizations are responsible for implementing the necessary processes within their areas for the timely maintenance, review, revision and cancellation of documents in accordance with these instructions and applicable quality management instructions, and to ensure that personnel operate in strict compliance with these and all other applicable standards, regulations, specifications and procedures.
- 1.5.4.3 OPRs are responsible for the prompt modification or cancellation of documents when they are no longer correct or applicable, and for the notification to other organizations that have a need to know when documents have been modified or cancelled.
- 1.5.4.4 OPRs are responsible for assigning document "ownership" or management responsibilities for their documents and providing a "Point of Contact" (POC) for each document and its contents.
- 1.5.4.5 OPRs are responsible for the assignment and designation of TechDoc System document "Creators" who shall be responsible for the creation and maintenance of the electronic files in the TechDoc System. Creators may or may not necessarily be the organization's responsible document owner/manager or POC, but shall be the person who sends the document to the TechDoc "Release Manager" for final review and release into the TechDoc system.
- 1.5.4.6 OPRs shall appoint a TechDoc "Release Manager" who shall be responsible for ensuring the general integrity and document quality, and releasing documents into the TechDoc System in accordance with TechDoc System procedures. The Release Manager may or may not necessarily be the document owner/manager or responsible POC but shall be responsible for coordinating and ensuring its proper release with the appropriate metadata and in the correct format and version. (Reference Section 1.5.6, Document Release Managers.)
- 1.5.4.7 Individuals assigned specific document management and maintenance responsibility, as document authors, owners/managers, or POCs are responsible for the content of their documents and adherence to the requirements of this SPR.
- 1.5.4.8 Document owners are responsible for ensuring that Safety Critical aspects are addressed in accordance with SPG (SPR) 8715.1, Stennis Space Center Safety and Health Procedures and Guidelines and other applicable safety instructions. (Reference Section 2.6.1, Safety Critical Notices.)

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- 1.5.4.9 OPRs are responsible for ensuring that personnel are properly trained in the use of the TechDoc system and that personnel assigned specific TechDoc System responsibilities (e.g., Creator, Release Manager, etc.) have properly established system accounts and training commensurate with their assigned system responsibilities.
- 1.5.4.10 Document owners/managers are responsible for ensuring that an alternate designee has the necessary technical knowledge, access, and ability to make any necessary changes when the primary document owner/manager is unavailable. Document owners/managers shall ensure that an appropriate "Access List" is associated with each document entered into the TechDoc System.
- 1.5.4.11 Document managers/owners are responsible for ensuring the notification of other document OPRs who have vested information requirements when their documents have been modified or revised. Document owners/managers are responsible for maintaining and ensuring the association of a "Distribution List" for each document entered into the TechDoc System for this purpose.
- 1.5.4.12 All OPRs and/or document managers/owners, who have vested information requirements in documents owned or managed by other OPRs, are responsible for notifying that OPR of their need for notification when documents have been changed or modified.
- 1.5.4.13 The OPR is responsible to ensure compliance with these requirements, and to ensure housing of documents (signed hard copy) in the appropriate filing system.

1.5.5 Document Creators

Document Creators are responsible for document initiation and modification processes. Responsibilities include:

- a. Preparation and modification of documents in accordance with the formats, standards, and instructions established herein.
- b. Uploading of new and modified document files to the system (*Create/Replace*) and checking documents in and out (*Reserve*) of the TechDoc system for modification.
- c Creation and association of Access and Distribution lists in Tech Doc
- d. Identification and association of metadata and Keywords to facilitate management, search and retrieval of information.
- e. Forwarding new or revised documents to the Release Manager for final review and release to the TechDoc system.

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1.5.6 Document Release Managers

Release Managers have overall responsibility for ensuring the quality of documents and for final release of documents for publication in the TechDoc System. Release Managers are responsible for:

- a. Conduct of final release reviews of documents, ensuring that any corrections are made, and ensuring correct version information before release for publication in the TechDoc System.
- b. Release of documents to the TechDoc System for formal publication.
- c. Ensuring Access and Distribution lists, metadata, and Keywords have been associated with documents (if not done by Creator) at their release and publication in the TechDoc System.

1.5.7 SSC Employees

All SSC employees are responsible for:

- a. The quality of their work, and for understanding and complying with the requirements contained in each SPR, SPD, or work instruction document.
- b. Following their organizational requirements for creating, reporting, or requesting changes and modifications to documentation
- c. Ensuring that the work instructions they are using are the latest and correct version, and for prompt reporting of errors and necessary corrections identified.

1.5.8 Support Contractor Organization

The designated Support Contractor organization is responsible for the administration, maintenance, and operation of the IT technical systems and applications supporting documentation management. The contractor organization is responsible for:

- a. Administering and operating the TechDoc System. This includes:
- (1) Issuance of TechDoc accounts;
- (2) Document administration and maintenance within the system;
- (3) System entry oversight and ensuring correction of errors;
- (4) Development of user guides; and
- (5) Provision of user training and support.

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- b. Administration and operation of the SDNS including user support.
- c. Assisting the Center Operations Directorate and the CIO in the development of necessary information and documentation to support SSC IT and documentation management efforts.
- d. Providing daily oversight for SSC documentation management operations.

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CHAPTER 2. DOCUMENT PREPARATION AND MANAGEMENT

2.1 Official NASA Document Hierarchy

All documents which influence the implementation and performance of SSC initiatives and work objectives fall within a documentation hierarchy that defines the document's influence and describes its type, purpose, general content, and issuance requirements.

All SSC documentation shall be categorized by Type for assignment of document numbers and entry into the SSC TechDoc system. The official NASA and SSC document hierarchy is illustrated in Table 2-1, below. The instructions for standard numbering and use of TechDoc in Appendixes B and C provide additional definition for the types of documents and categorization for TechDoc publication.

Table 2-1 – NASA Document Hierarchy

Level	Description/Definition
1. NASA Policy Directives (NPD) (replaced NASA Management Instructions [NMI])	NPDs document NASA policy and identify responsibilities, authorities, and principal policy relationships. NPDs describe <i>WHAT</i> is required by NASA management for achieving NASA's vision and mission. NPDs bear an expiration date of 5 years from the effective date and must be revalidated, revised, or cancelled at that time. NPDs are published in the NASA Online Directives Information System (NODIS) and are not entered in the SSC TechDoc System. NPDs are considered External Documents for SSC International Organization for Standardization (ISO) reference purposes. Compliance with NPDs is mandatory.
2. NASA Procedural Requirements (NPR) (formerly Procedures and Guidelines [NPG] which replaced NASA Handbooks [NHB])	NPRs provide specific detailed requirements and procedures for implementing NASA policies. NPRs provide a basis for development of common approaches among NASA Centers or between Centers and Headquarters (per NPR 1400.1, NASA Directives System). NPRs bear an expiration date of 5 years from the effective date and must be revalidated, revised, or cancelled at that time. NPRs are published in NODIS and are not entered in the SSC TechDoc System. NPRs are considered External Documents for SSC ISO reference purposes. Compliance with NPRs is mandatory.
3. NASA Interim Directives (NID)	NIDs establish <u>new</u> requirements for which there is no directive covering the subject currently in place. NIDs are effective for only one year to allow time for formal preparation of instruction. NIDs are typically issued by letter or memorandum.
4. Stennis Policy Directives (SPD) (replaced Stennis Management Instructions [SMI])	SPDs document specific SSC Center policy and identify responsibilities, authorities, and principal policy relationships. SPDs describe <i>WHAT</i> is required by SSC management for achieving SSC's vision and mission. They are unique to SSC and they must not repeat policy prescribed in NPDs. SPDs bear an expiration date of 5 years from the effective date and must be revalidated, revised, or cancelled at that time. SPDs are issued when there is no stated NASA policy or when NASA policy is insufficient for SSC's specific needs. SPDs are published in the TechDoc System and also in NODIS for NASA-wide and public reference. SPDs are signed and approved by the SSC Center Director and are controlled, issued, and released by the SSC Directives Manager. SPDs are applicable to the Center as a whole across all organizational boundaries. Compliance with SPDs is mandatory.

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Level	Description/Definition
5(a). Stennis Procedural Requirements (SPR) (formerly Stennis Procedures and Guidelines [SPG])	SPRs provide specific detailed Center procedures and requirements for implementing NASA or SSC policies considered essential for accomplishing requirements established by SPDs, NPDs, or NPRs. SPRs prescribe requirements and describe WHO, WHAT, WHEN and HOW. SPR's bear an expiration date of 5 years from the effective date and must be revalidated, revised, or cancelled at that time. SPRs are unique to SSC and are issued when there is no stated NASA procedure or requirement or when a NASA procedure is insufficient for SSC's specific needs. SPRs are published in the TechDoc System and also in NODIS for NASA-wide and public reference. SPRs are approved by the SSC Center Director and controlled, issued, and released by the SSC Directives Manager. SPRs are applicable to the Center as a whole across all organizational boundaries. Compliance with SPRs is mandatory. SPR 1280.1 is the specific SSC Tier-1 ISO document implementing the SSC Management
SSC Management	System. SPR 1280.1 specifically establishes the SSC management system policy and
Manual 6. Stennis Interim Directives (SID)	objectives for quality management. SIDs establish <u>new</u> requirements for which there is no directive covering the subject currently in place. SIDs are effective for only one year to allow time for formal preparation of instruction. SIDs may be issued by letter or memorandum.
7. Work Instructions & Procedures	Work instructions and procedures are the <i>How To</i> instructions for further implementing or achieving requirements of Federal regulations, NPDs, NPRs, SPDs, and SPRs, and/or accomplishing work goals, objectives, and deliverable products at Center, Organizational, Departmental, Office, Unit, or individual levels. In the context used here, Work Instructions, Common Work Instructions, and Procedures are generic terms describing the specific processes and procedures used to achieve stated objectives and requirements. They may be identified by a variety of names used to categorize the instruction by defining the type of information to be purveyed (e.g., Work Instruction, Common Work Instruction, Management Procedure, SOP, Technical Procedure). Work instructions and procedures may be applicable across several organizations with shared work objectives or to single individual areas. Common Work Instructions provide instruction applicable across the Center as a whole. Work instructions and procedures are SSC Tier-3 ISO documents. These documents are prepared, issued, released and managed by the responsible organizations (OPR). Various approvals may be required. Work Instructions are published in the TechDoc system. These documents bear a review date (3 to 5 years from effective date) to ensure their ongoing and continuing accuracy and validity.
7. Records & Forms	Records and Forms provide the objective evidence (Results) of the performance of work and achievement of requirements and deliverables. Records and Forms are SSC Tier-4 ISO documents. Records are managed in accordance with NPR 1441.1, NASA Records Retention Schedules and are indexed in the SSC Master Records Index (MRI).

2.2 Standard Documentation Format

- 2.2.1 A standard documentation format shall be applied to all SPD's, SPR's, and work instructions and procedures. Reference requirements below and in Section 2.3, Standard Document Formats and Styles for document-specific layout and organization.
- 2.2.2 The standard format has been developed for use with the standard SSC desktop word processing application. The following page setup shall be used:

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Top 1"
Bottom 1"
Left 1"
Right 1"
Gutter 0"
Header 0.5"
Footer 0.5"

- 2.2.3 The font shall be 12 pt Times New Roman type, with numbered elements (chapters, sections, major paragraph titles) in bold and document text in "regular."
- 2.2.4 SSC documents shall contain the following standard components:
- a. Cover.
- b. Headers.
- c. Document History Log (change page).
- d. Approval/Concurrence Signature(s).
- e. Standard body subject elements and styles specific to type of document.

2.2.1 Standard Cover

SPD, SPR, and work instruction documents shall have a standard cover page containing the document number and revision level, issuance/effective date of the current revision in the upper right corner, document title centered on the page, and displaying the NASA logo at the top left. The same general cover format may also be used for other types of SSC documents. A standard cover is illustrated in Figure 2-1 and well as on the front of this SPR.

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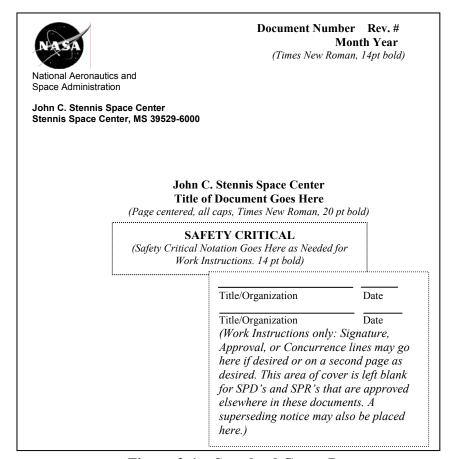


Figure 2-1 – Standard Cover Page

The Revision Level showing on the cover as well as the header shall be updated each time the document is revised.

Note: Provision is made for placement of a stamp such as a "Safety Critical" notice on the cover. This notice is not required for all documents, but shall be placed on the cover as applicable to the requirements of a given process or procedure.

2.2.2 Standard Header/Footer

A standard header shall appear on <u>all</u> pages except the cover page and any attachments from a secondary/external source. The standard header accommodates format requirements established for NASA Directives as well as provides a standard methodology for presenting the necessary information about SSC instructions. Use of the header ensures that the user of the instruction has not only the correct instruction but, also, all of its pages.

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2.2.2.1 Header Structure, Format, and Size

The header is utilized on all pages of documents except the cover. The header in this document is an example and may be copied and used as a template when preparing new documents (word.doc). The header structure, which is a customized table, is illustrated in Figure 2-2.

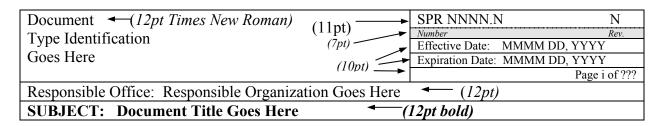


Figure 2-2 – Standard Header

2.2.2.2 Header Content

All headers shall contain six informational elements as described below.

- (1) <u>Document Type Identification</u> (e.g., Stennis Policy Directive, Stennis Procedural Requirements, Standard Operating Procedure, Maintenance Instruction, Work Instruction, etc.). The document type shall correlate to the document category/type definitions of the NASA Documentation Hierarchy (see Table 2-1), the definitions established by the SDNS methodology and the SSC TechDoc System (see Appendixes B and C).
- (2) <u>Document Number and Revision Level</u>. The document number shall be assigned in accordance with the standard numbering methodology and issued by the SDNS. See Section 2.4 for additional instruction and guidance on revising documents, and Appendix B for information on document numbering and use of the SDNS.
- a. The Revision level, discussed in Section 2.5.4, shall reflect the most current version of the document to be used. Revisions are numbered: Basic, A, B, C or 0, 1, 2, 3, etc. Dates are not recommended because of their length and the greater potential for error and inconsistency in entry.
- b. The document number and revision level appearing on the document cover and header shall match the document number and revision level entered in the TechDoc System upon its publication.
- c. The revision level indicated on the cover and in the header shall be updated to match annotations in the Document History Log each time changes are made to a document.

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- (3) Effective Date and Expiration/Review Date.
- a. SPDs and SPRs shall bear an effective date and expiration date in accordance with NPR 1400.1, NASA Directives System Procedural Requirements.
- (1) The effective date shall be the issuance date of the current version.
- (2) The expiration date shall be a maximum of 5 years from the effective date.
- (3) All SPD's and SPR's shall be reviewed every 5 years and either renewed or cancelled at that time.
- (4) Directives not revalidated after 5 years shall be considered expired.
- (5) If warranted and justified, the expiration date of SPD's and SPR's may be extended for 90 days to allow time to complete reviews and revisions. Extensions are not automatic. Extensions shall be coordinated through the SSC Directives Manager.
- b. Work Instruction or procedural documents shall bear the effective date of the current version and a Review date of 3 to 5 years hence, or more often if deemed necessary (reference paragraph 2.5.5, Reviews and Cancellations). Instructions and procedures shall be reviewed a minimum of every 3 to 5 years, if not revised more often, to ensure the continuing applicability and effectiveness of the instruction.
- (4) <u>Page Number and Number of Pages</u>. Documents shall be numbered in a "Page # of #" format.

Note: The cover page is an unnumbered page. Succeeding pages begin with Arabic page 2 in the header.

(5) <u>Responsible Office</u>. The name of the Office or Organization responsible for the preparation, issuance, and maintenance of a document shall be entered.

Note: Except for SPD's and SPR's, and then only when absolutely necessary, the use of organizational codes is not recommended. Instead, use of office or functional titles is recommended to preclude the necessity for document revisions when organizational or contract changes occur.

(6) <u>Subject: Document Title</u>. The document title shall be entered in the Subject line as it appears on the front cover excluding the name "John C. Stennis Space Center" as part of the title.

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Note: Document titles are descriptive of their purpose and function, but do not have to contain the words "Procedural Requirements" or "Work Instruction." For example, the title of an SPR could be "Safety Manual" or a Technical Procedure could be "Acme Valve X500 Lubrication Process."

2.2.2.3 Footer

Footers shall not be formatted or used*. The footer space is left available on the bottom of document pages for the placement of a standard "Release Statement" by the TechDoc System when the document is published. All policy, procedure, and work instruction documents entered into the SSC TechDoc System are considered "Controlled Documents." All documents shall bear the statement "*RELEASED – Printed documents may be obsolete; validate prior to use.*" This caution is automatically issued and printed on all document pages by the TechDoc system to ensure that users are working to the latest version of the document. This aids in satisfying ISO requirements for document control.

*Special Note: If needed, the footer may be used for special information such as contractor proprietary statements or for statements relative to NASA document sensitivity (e.g., Sensitive But Unclassified [SBU], ITAR, Homeland Security, etc.). Sufficient space must still be allowed for the "Released" statement to appear when the document is published. (See paragraph 2.7.5, Document Sensitivity and Security for additional information regarding document marking and handling.)

2.2.3 Change Page – Document History Log

All documents shall contain a "change page" which is used to record all changes and revisions to a document throughout its life. The change page is in a table format and titled "Document History Log." The Document History Log is typically the first page of the document following the cover. The Document History Log shall contain the columns and informational elements shown below

- 1. <u>Status/Change/Revision</u>: This column reflects the document's version and revision (Rev.) level status from its creation throughout its life for every change or document revision performed. The revision level reflected on the cover and in the header of the document shall match exactly with the information in this column as well as the revision information entered in the TechDoc System. See Section 2.5 for additional instruction regarding document changes and revisions.
- 2. <u>Change Date</u>: This column reflects the date of the change or revision being performed. This date shall generally correlate to the Effective Date of the document.

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- 3. <u>Originator/Phone</u>: This is the name and phone number of the person responsible (OPR) for issuance of the document and its changes. This person shall be the knowledgeable Point of Contact (POC) for the document's technical content and history.
- 4. <u>Description:</u> This column contains descriptive information to identify any and all changes to a document. The descriptive information shall be explicit and provide sufficient detail and information to clearly identify, trace, and track all document changes. Document managers shall ensure that notations provide sufficient detail to satisfy SSC Management System requirements. Reference SSLP-1410-0001, Document and Data Control and/or consult with the SSC Management System Representative. Some examples of incorrect and correct notations are provided below for general reference.
 - NOT CORRECT: Changed References.
 - NOT CORRECT: Revised paragraph x.x.
 - CORRECT: Removed reference to revision levels and amended text to reflect proper reference to revision level, paragraph x.x.x. Deleted reference to Quality Records, paragraph x.x.x. Changed text to Reference Master Records Index.
 - CORRECT: Corrected typographical and grammatical errors throughout document. Performed administrative changes only; no changes to technical meaning or content.

The *Document History Log* appearing in the front of this SPR may be used as a template for preparation of new documents. Format and structure are illustrated in Figure 2-3.

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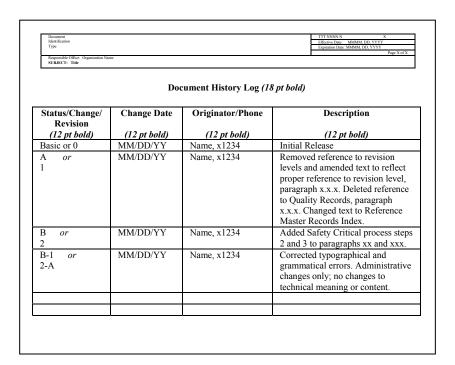


Figure 2-3 – Document History Log

2.2.4 Approvals and Concurrences

Approvals are required for all documents for records and management purposes.

- a. One or more approvals or concurrences shall be required depending on the document and organizational requirements.
- b. For security reasons, only original hard copy documents shall bear actual signatures. The electronic version shall be entered in TechDoc.

Note: SPDs, SPRs, Scientific and Technical Information (STI), and Agreements (SAA), with original signatures, shall be retained in the Records and Documentation Office (RDMO). All other documents with original signatures shall be retained in the files of the OPR.

- c. The electronic document files entered in the SSC TechDoc System shall bear notations such as "Original Approved By," "Signed By," or "Signature on File" along with the date actually signed.
- d. Except for minor administrative changes, changes and revisions, including redlines, to documents shall be approved by the appropriate officials each time they occur.

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- 2.2.4.1 For SPR's and SPD's, the approving signature shall be located as a Center Director's signature block following the *CANCELLATION* subject element. (See paragraphs 2.3.1 and 2.3.2.) In addition to this document, also reference NPR 1400.1 for NASA instruction regarding Directives.
- 2.2.4.2 SSC Work Instruction or procedure documents shall require one or more approvals or concurrences. The approval and concurrence lines for these documents may be located in several different places depending upon requirements or user need. The location option will be at the discretion of the document manager/owner. Approval lines may be placed on the front cover as illustrated in Figure 2-1, may be inserted as a separate page immediately following the cover, or may be inserted above and on the same page as the Document History Log as in the example shown in Figure 2-4.

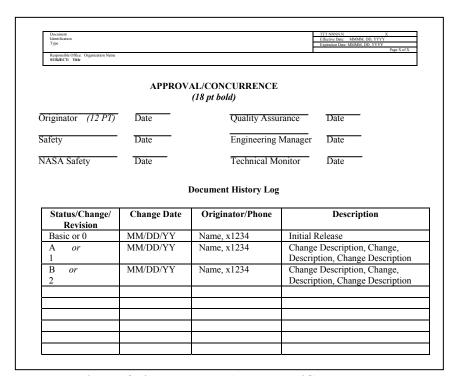


Figure 2-4 – Example Approvals/Concurrences

2.3 Standard Document Formats and Styles

The document standards for required components, format, paragraph elements, and styles vary depending upon the type of document. Stennis Policy Directives and Stennis Procedural Requirements (SPDs and SPRs) shall be prepared in accordance with the basic instruction for format and style provided in NPR 1400.1, NASA Directives System Procedural Requirements

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and the additional guidance in the following paragraphs. Specific instruction for preparation of Stennis Work Instructions and procedural documents is also provided below.

Note: Requirements for directives specified in NPR 1400.1 are subject to change from time to time. That directive should be used along with this instruction in the preparation of SSC directives to ensure all requirements are met.

2.3.1 Stennis Policy Directives

2.3.1.1 Issuance of SPDs shall be coordinated through the SSC Directives Manager in accordance with the Directives Process Flow given in Figure 2-5.

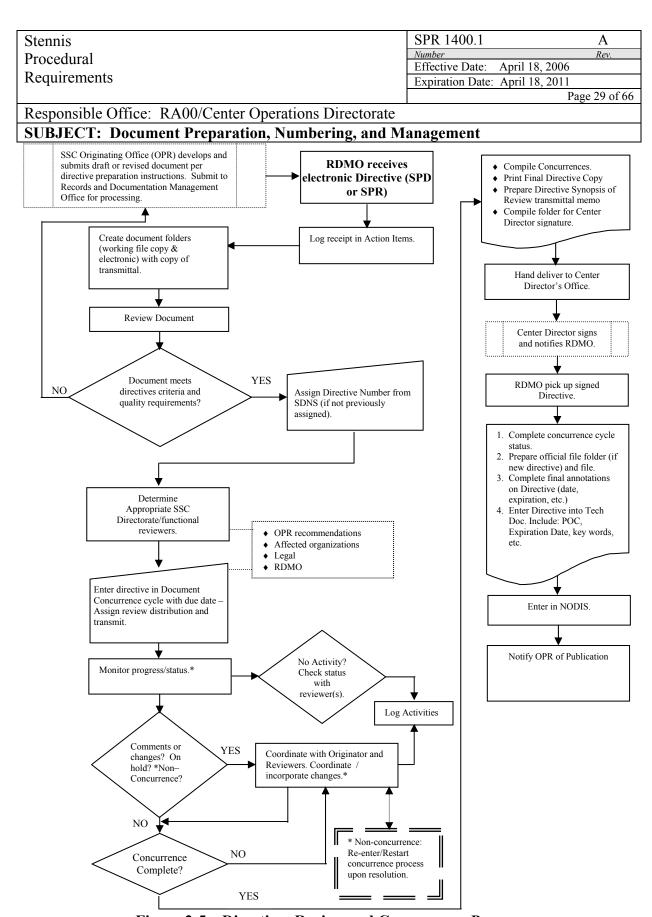


Figure 2-5 – Directives Review and Concurrence Process

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2.3.1.2 SPDs shall be limited to four pages or less.

Note: The SSC Directives Manager must coordinate any special requirements for deviation from this page limitation and standard format.

- 2.3.1.3 SPDs shall include the standard SSC *Cover*, *Document History Log*, and *Header(s)* and the prescribed paragraph subject elements and numbering listed below. The body of the document immediately follows the *Document History Log*.
- a. **1. POLICY** Statements of policy should be unique to Stennis and not a repetition of NASA policy.
- b **2. APPLICABILITY** Statements of applicability are specific to personnel, functions, organizations, and requirements at SSC. Applicability statements shall describe whom the instruction specifically applies to, and who must follow it.
 - (1) Statements shall include the following applicability statement: "This SPD is applicable to NASA/SSC personnel."
 - (2) If the SPD is to apply to SSC contractors, resident agencies, contracts, or grant recipients, the applicability statement shall also include a separate statement as follows: "This SPD applies to contractors, resident agencies, and grant recipients only to the extent specified or referenced in the appropriate contracts, grants, or agreements." The statement may be edited as appropriate to the actual applicability.

Note: The above statement alone is not sufficient to stipulate requirements for contractors, etc. The contract, grant, or agreement must state the requirement(s) from the NPD, NPR, and/or SPD that apply.

- c. **3. AUTHORITY** List 42 U.S.C 2473(c)(1), Section 203(c)(1), of the National Aeronautics and Space Act of 1958, as amended, or other laws, executive orders, statutory citations, NPDs, or external references that authorize the directive or mandate the need for the SPD.
 - For public laws, or executive orders, cite the number and date; titles are optional.
 - Associated internal or external NASA documents are cited under paragraph 4, References.
- d. **4. REFERENCES** List any NASA, SSC, or other external documents cited in the body of the directive that contains provisions or other pertinent requirements directly related and necessary to the performance of the activities specified by the directive.

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- Do not show the revision or version number unless only that specific version of a document is to be referenced or used in the performance of the required activities.
- URLs or hot links may be included if available and appropriate but, if using, exercise
 caution; links may change without notice thus compromising the quality and
 effectiveness of the document.
- e. **5. RESPONSIBILITY** Identify the Stennis officials in charge of the Center, Directorates or their designees who are responsible for implementing the policy. Officials in charge of SSC Directorates are responsible for overall management of the policy and for identifying those who are empowered to accomplish the policy and identifying those who are accountable for enforcing the policy.
- f. **6. MEASUREMENT** Explain how compliance to the SPD will be measured.
- g. **7. CANCELLATION** List directive(s) to be cancelled upon issuance of the directive; otherwise state NONE.
- h. Signature Block Center Director. The signature block immediately follows Cancellation.
- i. Attachment List attachments if applicable.
- j. <u>DISTRIBUTION</u> The following distribution statement shall be used: "Approved for public release via TechDoc and NODIS; distribution is unlimited."

2.3.2 Stennis Procedural Requirements

- 2.3.2.1 Issuance of SPRs shall be coordinated through the SSC Directives Manager in accordance with the Directives Process Flow given in Figure 2-5.
- 2.3.2.2 SPRs shall contain requirements only. Requirements must be stated in a "Shall" statement format. Text of a clarification nature may be provided but detailed guidance's relative to requirements shall either be published in an appendix or published in separate instructional guidance documents that are cross referenced.
- 2.3.2.3 Format of SPRs shall include, but is not limited to, the standard SSC *Cover*, *Document History Log*, and *Header* and the prescribed components, elements and paragraphs listed below and as specified in NPR 1400.1. (Note: This document follows the SPR format.)
- a. **Table of Contents** (page title 12-pt bold, centered) Immediately follows the *Document History Log*. The TOC utilizes a standard style structure available in word processing applications.

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- b. **PREFACE** (page title 12-pt bold, all-caps, left justified) Immediately follows the TOC. The Preface contains the following standard paragraphs and numbering structure. Paragraph titles shall be 12-pt bold, all caps; and all titles and text left justified.
- (1) **P.1 PURPOSE** Describes the aim and objective of the document, and what the instruction does and does not cover. Subparagraphs are numbered P.1.1, P.1.2, etc.
- (2) **P.2 APPLICABILITY** Describes whom and what the instruction specifically applies to, and who must follow it.
 - (1) Statements shall include the following applicability statement: "This SPR is applicable to NASA/SSC personnel."
 - (2) If the SPR is to apply to SSC contractors, resident agencies, contracts, or grant recipients, the applicability statement shall also include a separate statement as follows: "This SPR applies to contractors, resident agencies, and grant recipients only to the extent specified or referenced in the appropriate contracts, grants, or agreements." The statement may be edited as appropriate to the actual applicability.

Note: The above statement alone is not sufficient to stipulate requirements for contractors, etc. The contract, grant, or agreement must state the requirement(s) from the NPD, NPR, SPD, and/or SPR that apply.

- (3) **P.3 AUTHORITY** Same instruction as SPD.
- (4) **P.4 REFERENCES** Same instruction as SPD.
- (5) **P.5 CANCELLATION** Same instruction as SPD.
- (6) Signature Block Center Director. Signature block immediately follows Cancellation.
- (7) <u>DISTRIBUTION</u> The following distribution statement shall be used: "Approved for public release via TechDoc and NODIS; distribution is unlimited."
- c. **CHAPTERS** The instructional body text of SPRs shall be provided in Chapters.
- (1) As many chapters as needed to describe the requirements, processes or procedures shall be included in the document.
- (2) All chapters shall begin on a new page. Chapters should be separated by page or section breaks.

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- (3) Chapter titles shall be followed by a paragraph border across the page before beginning the text content.
- (4) Chapters shall follow the general format and outline numbering standard in Figure 2-6.

```
CHAPTER 1.TITLE (12-pt bold, all caps, solid paragraph border)

1.1 Title (12-pt bold), Text 12-pt
1.2
1.3
1.3.1
1.3.2
1.3.2.1
1.3.2.2 (shall not exceed 4-digit level)
```

Figure 2-6 – SPR Chapter Format

d. **APPENDICES** – Appendices can be included if needed or appropriate, labeled A, B, C, etc. with titles. Appendices shall be listed in the Table of Contents. Appendix A shall be used for definitions and acronyms with others following as needed.

2.3.3 Stennis Work Instructions and Procedures

- 2.3.3.1 SSC Work Instruction and procedural documents shall include at a minimum the standard *Cover*, *Header(s)*, *Document History Log*, *Approvals*, and numbered section/body text.
- 2.3.3.2 Standard paragraph subject and text elements include, but are not limited to, the required and optional elements outlined below. The outline provides a recommended structure for organizing a document; however, the listed subject elements, other paragraph titles as needed, and their paragraph numbering may be associated and arranged to best fit the informational requirements of the document. Those elements designated as required shall be specifically addressed in the document, with other elements addressed as appropriate.
- a. **Table of Contents** (page title 12-pt bold, centered) This element is not absolutely required, but may be included if warranted from the complexity or length of the document. If needed, the TOC shall follow on the next page after the *Document History Log* and precede the body text of the document.
- b. **X.X Purpose** (section title 12-pt bold, left justified) Required Element: Describes the aim and objective of the document and what and whom the instruction does and does not cover.

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Objective and Scope may be included as part of this section as appropriate or may be separate sections.

c. **X.X Applicability** – (section title 12-pt bold, left justified) Required Element: Describes who and what the instruction specifically applies to and who must follow it (organizations and functions). *Does the instruction apply Centerwide, only to NASA, NASA and contractors, multiple or specific organizations or work units, etc.*?

Notes: (1) If an instruction bears universal or general applicability across the Center and essentially to all organizations, consideration should be given to preparation and publication as a SSC Common Work Instruction (SCWI) or SSC Directive, i.e., SPR, rather than as a localized work instruction. Development of SPRs should be coordinated through the appropriate NASA manager and the SSC Directives Manager. (2) The term "Applicability" should be used for this element. The term "Scope" implies the depth and breadth of a subject and does not necessarily bear the same meaning as "Applicability."

- d. **X.X References** (section title 12-pt bold, left justified) Required Element: This element shall reference all documents (other instructions, policies, and procedures, Directives, external references) and any regulatory requirements that influence or are necessary to the performance of the activities being documented. Note: References must be called out somewhere in the body of the text.
 - Sources for external or secondary source materials cited shall be accessible for reference.
 - The following standard phrase shall be included as text of this section: "All references are assumed to be the latest version unless otherwise indicated."
 - The "version number" shall not be included in referenced documents unless only that version of a document must be used for reference and performance of the activity.
- e. **X.X Responsibilities** or **Roles and Responsibilities** (section title 12-pt bold, left justified) This element is not absolutely required <u>but is highly recommended and may be appropriate as a specific element for many instructions</u>. The element should describe who (by job function) has responsibilities for performing or implementing specific tasks or actions.

Note: This titled element may be eliminated if roles and/or responsibilities are fully defined within the specific step-by-step processes or procedures being defined.

- f. **X.X Procedure(s)/Process(es) or Other Title(s) as appropriate** (section title 12-pt bold, left justified) Required Element(s): This may be one or more sections with appropriate titles as necessary to describe the processes, procedures, instructions, etc.
 - The words "Procedure" or "Process" do not necessarily have to be a part of the title or titles

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- This section or sections should be a complete description of tasks to be carried out, by whom, and in what sequence.
- g. **X.X Records and Forms** (section title 12-pt bold, left justified) Optional but recommended element: This element shall reference/list any specific documentation needed to perform the procedure, the records or forms that will be or must be maintained in the performance of the activity, or that are directly relevant to its performance.
 - If there is an "Official" ISO Quality record associated with the activity, it may be noted as such.
 - The following standard phrase shall be used in the text of this section: "All records and forms are assumed to be the latest version unless otherwise indicated. Quality Records are identified in the SSC Master Records Index." If there are no records or forms associated, state "None."
- h. **X.X Acronyms, Abbreviations, and Definitions (or appropriate title)** (section title 12-pt bold, left justified) Use as needed: Define all acronyms and abbreviations and provide definitions for the unique terminology of the document.
 - Acronyms and abbreviations should be defined on their first occurrence in the text as well as in a listing.
 - This section may be included wherever logical within the document, inserted before the detailed process or procedure or as Appendix A to the document as warranted.
- i. **X.X. Attachments** May be included if prepared by SSC and not from an external or secondary source.
- j. **X.X Flowchart** Use as needed; however, flowcharts can be extremely useful.
 - In some cases, use of a flowchart can be substituted for a substantial amount of text. For example, if a flow chart fully describes a process or instruction described in your procedures, you could simply say that "Processes are performed in accordance with the flow chart in paragraph X.X."
 - A checklist can be used to also satisfy descriptive requirements within the text.

2.4 Standard Numbering Requirement and Purpose

Standardized and controlled numbering methodology shall be used for all instructional documents that originate and are distributed within SSC. The purpose of standard methodologies is to provide uniformity and consistency in numbering documentation for NASA/SSC and its contractor organizations to facilitate documentation management, referenceability, and retrieveability and to aid records management.

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The Stennis Document Numbering System (SDNS) provides an automated method for assigning and tracking document numbers. The numbering scheme used by the system aligns with the methodology used for NASA Directives and the Agency File Scheme (AFS) subject codes to provide a common structure for all organizations. Reference Appendix B, Standard Numbering Methodology and System, for instruction in use of SDNS.

- a. The SDNS shall be used to issue all SSC documentation numbers as defined above and in Appendix \boldsymbol{B}
- b. Document authors shall access the SDNS for assignment of a document number during the preparation process.

Note: The Directives manager shall assign all directives numbers.

c. Document numbers shall be assigned prior to publication of a document in the TechDoc System.

2.5 Document Management – Changes, Revisions, Reviews and Cancellations

2.5.1 Version Number

- a. The initial release of a document is generally identified as the "*Basic*" version. The initial release shall be annotated in the "*Revision*" level number of the document with the word "Basic" or the numeral "0."
- b. Version numbers shall be incrementally raised upon each document revision (e.g., A, B, C or 1, 2, 3).
- c. Dates shall not be used to denote the revision level or version of a document.
- d. Any and all modifications (defined as either technical or administrative changes) to a document shall be reflected in the *Document History Log*.
 - The current revision level shall be reflected on the *Cover*, *Document History Log*, and page headers.
 - The revision level shall also be entered as part of the data entry process when the document is published in TechDoc.

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2.5.2 Technical Changes

Any technical change to a document shall automatically be considered a *Revision* and the version level raised to the highest next increment. Technical changes include, but are not necessarily limited to, any change that affects:

- Form, fit, or function.
- Safety or Quality Assurance.
- Technical content or meaning.
- Required references (e.g., new references, changes in number or title).
- Essential forms.

2.5.3 Administrative Changes

- 2.5.3.1 Modifications to a document that do not change the meaning or technical content (usually corrections for spelling, typographical errors, punctuation, or grammar) shall be considered Administrative changes. Any modification that affects meaning shall not be considered an administrative change. Caution should be exercised in making corrections as to whether the meaning has changed either literally or contextually.
- 2.5.3.2 The correction of a spelling or typographical error may have administrative or technical impact depending upon the correction. For example, in the sentence "Turn the switch of." the word *of* is obviously incorrect but the indicated meaning may be assumed generally clear from the spelling and context. Correcting the spelling to "off" might be an administrative change. However if the word should have been "on" then the change would be technical in nature as it does affect the technical performance. Similarly, changing the value 7.0 for a setting or specification to any other value (e.g., 7.1) is not strictly a typographical correction but is obviously a Technical change.
- 2.5.3.3 Administrative changes to a document allow smaller incremental changes in the version level of a document without being considered a revision. A modification to a document that affects less than 50 percent of its total content or pages and does not affect the technical content or meaning may be considered an administrative change. Administrative changes performed subsequent to issuance of a major revision may be annotated as A-1, A-2 or 1-1, 1-2, etc. in the *Document History Log*. The *Document History Log* shall adequately describe the changes made.
- 2.5.3.4 The use of Change Bars in the body of the text to indicate where changes have been made is a good indicator. Up to five (5) Administrative changes to a document may be issued before the changes shall be considered a revision, and the revision level raised to the highest next increment.

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Note: The need for numerous administrative changes is usually indicative that initial pre-release and issuance reviews have been inadequate to ensure the quality and content of the document. A thorough and complete editorial and content review shall be conducted prior to releasing any document for publication in the TechDoc System.

2.5.4 Revisions

Any modification to a document that affects more than 50 percent of its total content or number of pages and/or affects its technical content or meaning shall be considered a revision, with the revision level of the document moving up to the highest next increment. A revision shall be made automatically upon the sixth Administrative change to a document regardless of whether the aggregate of the previous interim changes affects the majority of the document.

Organizations shall follow established review and approval processes and procedures for their organization.

2.5.5 Reviews and Cancellations

The OPR and/or the document manager are responsible for periodic reviews of those documents within their purview to ensure continuing applicability and validity of content. Offices and organizations are responsible for establishing the necessary document and data control processes and procedures to ensure timely document review, revision, and information accuracy. Development and use of a review/release checklist is recommended. An optional checklist (SSC Form 738, TechDoc System Documentation System Release Checklist) is available on the SSC Electronic Forms Index located under Reference Documentation on the SSC Intranet.

- a. SPDs and SPRs shall be reviewed, revalidated, or revised at a minimum once every 5 years prior to their expiration date.
- b. Work instruction documents shall be reviewed a minimum of once every 3 to 5 years.
- c. Reviews and revisions to all documents may occur more often as necessary corrections or changes are identified.
- d. Corrections and changes shall be made to documents as they are identified.
- 2.5.5.1 Changed or revised documents shall be reissued and republished in the TechDoc System to ensure that all users have access to and are using the latest and correct version of an instruction.
- 2.5.5.2 Documents shall be officially cancelled and removed from access when the instruction is no longer valid. A *CANCEL* process is used to cancel documents that are no longer valid and for

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the conversion process of legacy documents to the new format and numbering methodology. (See paragraph 2.6.1 and Appendix C for further information regarding cancellations of legacy documents and document history.)

- a. Notices of cancellation (*Cancel Page*) shall be placed in the TechDoc System to replace the document being canceled or converted. The TechDoc System treats the CANCEL process as a document revision for purposes of maintaining document history.
- b. *CANCEL* shall be shown as the revision level for a document being cancelled. No other phrase or word shall be used.
- c. Cancel pages shall contain the information illustrated in the example form in Figure 2-8. Access to the *Cancel Page* form (SSC Form 738B) is provided on the SSC Electronic Forms Index located under Reference Documentation on the SSC Intranet.

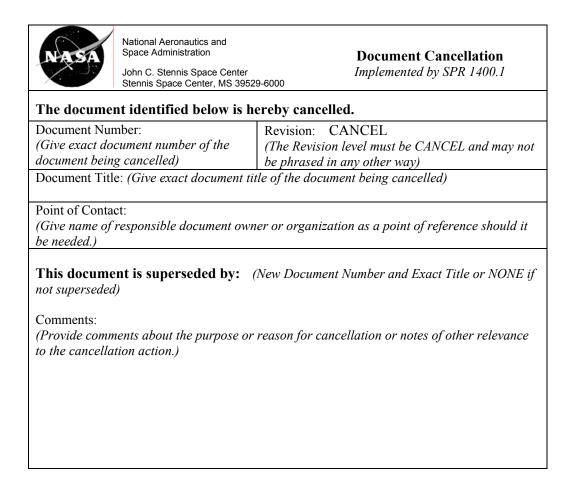


Figure 2-7 – Document Cancellation Page

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2.5.6 Notifications of Changes or Revisions

Cross-referencing of documents or instructions is a major concern for SSC personnel in the document management process and performance of necessary activities. Document managers are responsible for notifying key users and all affected organizations when documents have been modified, revised, or cancelled (reference Section 1.5.4 Offices of Primary Responsibility (OPR) – Document Managers and Owners).

- a. Key notification/standardized distribution lists shall be developed and associated with documents in the TechDoc system to ensure the notification process.
- b. Conversely, organizations that cross reference critical documents as well as key document users are responsible for ensuring that document owners/managers are alerted to their need for inclusion on notification lists. Reference the TechDoc System for information on automated notification functions.
- c. SPDs and SPRs shall use the established standard distribution list (SDL) for SSC Directives.

2.6 Converting Legacy Documents

Legacy documents are considered to be those documents that predate the establishment and use of the documentation format and numbering standards described herein, and which may or may not have been previously entered into the SSC TechDoc System in either electronic or scanned format. The SSC document format and numbering methodology described herein shall be used on all legacy documents as they are revised or converted from scanned images to electronic format.

2.6.1 Canceling

As legacy documents are revised, the old document shall be canceled by the issuance of a *Cancel Page* containing the information illustrated in Figure 2-8, and the new document entered in the TechDoc System with its new number and format. See paragraph 2.5.5 for additional information on cancellation and document history.

- a. The *Cancel Page* shall explicitly provide the information for the new SDNS document number and title that is to replace the cancelled document. This information is essential to direct personnel to the new and correct document to be used. If a document is simply being cancelled and not replaced, this information area shall be left blank or state "None."
- b. The word *CANCEL* shall also be exactly entered in the TechDoc System as a revision when the Cancel Page replaces the old document.

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2.6.2 Revision Level Notation for Converted Documents

Responsible organizations and document managers shall map out a transition strategy for the revision and conversion of old documents to the new format and numbering system to ensure that cross-referencing issues are addressed and that key users are notified.

- a. To preserve sequential numbering and order of documents, pre-assignment and reservation of blocks of numbers in the automated SDNS may be important. If this option is desired, the SDNS administrators shall provide assistance.
- b. To prevent confusion and gaps in the document history maintained by the TechDoc System, the Revision level of a document, upon its conversion to its new number and entry in the system, shall revert to and start over at Basic or 0. See paragraph 2.5.4 for other information regarding *Revision* numbers or levels.

2.7 General Conventions and Requirements

2.7.1 Safety Critical Notices

Documents containing "Safety Critical" operations or processes shall be prominently marked as follows:

- a. *Safety Critical* notices shall be placed on the front cover of all such documents (cover posting of a "Safety Critical" notice is illustrated in Figure 2-1); and
- b. *Safety Critical* shall be prominently displayed within the body of the document(s) as required.

2.7.2 Contractor-Owned Documentation

- a. Contractor-owned documents include corporate/company policies, processes, and procedures (e.g., vacation, leave, tuition, etc.) and those internal or organizational management, administrative, and operating instructions that are proprietary to the contractor's specific operating methods. This includes Data Requirement (DR) type documents. Contractor logos shall be used on contractor-owned documents and their internal operations documentation only.
 - Annotations may be in any logical location as long as it effectively identifies the document as the property of the contractor.

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- Placement of a "Contractor Proprietary" notice in a "text box" under the title (like the "Safety Critical" notice illustrated in Figure 2-1) or in the lower right corner of the cover is a suggested but not required methodology.
- b. Contractor logos and names shall not be used on SSC documents and procedures prepared for and specifically applicable to performance of SSC functions, operations, and services. These process and procedural documents are considered to be NASA property and shall remain effective regardless of the performing organization.

2.7.3 Scanning

Use of electronic files whenever possible allows for easier revisions in the future and provides better capability for search and retrieval of information: however, textual searches of documents may not always be possible with scanned images. Consult with the TechDoc System Administrators for assistance and options when considering use of scanned documents and images.

- a. Scanning of procedural or instructional documents into the TechDoc System shall be avoided if at all possible.
- b. Scanning is permissible on external documents or older documents where absolutely no electronic file is available.
- c. All scanned legacy documents (i.e., policies, procedures, instructions) shall be converted to electronic documents upon redline or revision.

2.7.4 Use of Logos, Contractor Names, and Organizational Codes

Official NASA logos shall be used in accordance with NASA graphical standards. Contractor logos and names shall not be used on SSC documents and procedures prepared for and specifically applicable to performance of SSC functions, operations, and services (reference paragraph 2.7.2, Contractor-Owned Documentation).

- a. To help preclude document revision issues, use of specific contractor names or organizational codes when referencing organizations performing work activities is not recommended.
- b. Reference to contract titles (e.g., ITS or FOSC) or generic functions (e.g., Test Engineering, Facility Services, etc.) is recommended. Reorganizations and changes in contractors may occur regularly, but functions remain relatively constant.

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2.7.5 Document Sensitivity and Security

Appropriate statements of the document's sensitivity shall be footnoted or watermarked on all pages of such documents. Document owners shall follow all applicable guidelines in setting up a document to preclude general SSC or public access to information deemed sensitive. Relevant instruction regarding security of information and its marking and control is contained in NPR 1620.1.

Care shall be exercised in the handling and posting of sensitive documents in TechDoc for reference access and update. Some SSC documentation that may be published in the TechDoc System may be considered sensitive for security, privacy, proprietary, technology export, or other reasons. Reference Appendix C for information about the TechDoc system and document security.

2.7.6 General Style Convention

- a. The NPR 1450.10, NASA Correspondence Management and Communications Standards and Style, the United States Government Printing Office Style Manual, and the Gregg Reference Manual shall be the general guides for grammar, capitalization, punctuation, compound word forms, and numerals.
- b. The general guides for spelling in order of precedence shall be the NPR 1450.10, the Gregg Reference Manual, or any widely accepted dictionary of the English language, such as Webster's and American Heritage.
- c. Other useful and recommended guidance in the preparation of documentation can be found in:
 - NASA SP-7084, Grammar, Punctuation, and Capitalization, A Handbook for Technical Writers and Editors.

2.7.7 Writing and Composition

Technical procedures often pertain to complex components and convey specific step-by-step procedures for unique or unusual tasks. All document text shall conform to generally accepted standards of good English, and shall follow the practices outlined herein and applicable governmental standards. Reference Appendix D for some basic guidelines for writing and composition.

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2.7.8 Documentation Control System and Repository

The TechDoc System (TDS) is the designated repository for SSC documentation and is the official tool for document and data control. As such, it shall be used for the publication issuance, management, and revision control of all SSC instructional documentation. The system shall also be used for housing information resources of other classes such as plans, reports, reference documents, data sheets, etc. which are of lasting or important value to conduct SSC activities and support its information needs.

Access to the TechDoc System for query, search, and retrieval of documents is available to all SSC personnel from a common desktop browser. Complete information on the wide-ranging capabilities and functions of the system and user training is available through the SSC TechDoc Document Administrators. Reference Appendix C, Technical Documentation System (TechDoc) for functionality and use of the SSC TechDoc system.

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APPENDIX A – ACRONYMS AND DEFINITIONS

A.1 Acronyms

AFS Agency File Scheme
CIO Chief Information Officer

CWI Common Work Instruction (same as WI but with broader Center

applicability)

DCR, DR Discrepancy & Correction Records
DIR Directive(s) (NPD, NPR, SPD, SPR)

ED Engineering Drawings

ESD Engineering and Science Directorate
FOSC Facility Operating Services Contractor

GPO Government Printing Office

ISO International Organization for Standardization

IT Information Technology
MI Maintenance Instruction
MP Management Procedure
MRI Master Records Index
MSDS Material Safety Data Sheet

NASA National Aeronautics and Sp.

NASA National Aeronautics and Space Administration NODIS NASA Online Directives Information System

NHB NASA Handbook (changed to NPG and subsequently to NPR)

NMI NASA Management Instruction (changed to NPD)

NPD NASA Policy Directive

NPG NASA Procedures and Guidelines (changed to NPR)

NPR NASA Procedural Requirements
NRRS NASA Records Retention Schedules

OI Organizational Instruction

OPR Office of Primary Responsibility

PLN Plan

PNS Publication Numbering Series (for STI documents)

POC Point of Contact
PP Process Plans
OA Quality Assurance

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QP Quality Procedures

RDMO Records and Documentation Management Office

REF References
REP Report

SAA Space Act Agreement

SCD Specification Control Document

SDL Standard Distribution List

SDNS Stennis Document Numbering System

SHB Stennis Handbook

SID Stennis Interim Directive

SMI Stennis Management Instruction SOP Standard Operating Procedure

SP Safety Procedure

SPD Stennis Policy Directive

SPG Stennis Procedures and Guidelines (changed to SPR)

SPR Stennis Procedural Requirements

SSC Stennis Space Center

STD Standard

STI Scientific and Technical Information
TDS Technical Documentation System

TechDoc SSC Technical Documentation System

TI Test Instruction
TOC Table of Contents
TP Technical Procedure

TPI Technical Procedures and Instructions
TPS Test Preparation Sheet (Process Plan - PP)

TS Technical Standard WI Work Instruction

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A.2 Definitions

Administrative Change: A corrective change to a document that does not affect technical content or meaning and does not affect more than 50 percent of the document's content or total page count.

Agency File Scheme (AFS): Official NASA methodology for numbering and categorizing records according to subject matter. Used in conjunction with the NASA Records Retention Schedules.

Cancellation Page (CANCEL): A revised document placed in the TechDoc System to cancel the currently active document.

Change Page: A required page in all SSC procedural or instructional documents for maintaining the history of all changes and modifications to a document. Called *Document History Log*.

Contractor-Owned ("Proprietary") Document: A document solely owned and managed by a contractor describing a contractor's specific corporate/company or internal management instructions and operating processes that does not implement activities essential to continuity of SSC operations.

Creator (Document): Person having responsibility for preparing and uploading documents into the TechDoc System. May be the same person as the Release Manager and may or may not be the person responsible for actual document ownership and management.

Documentation Custodian (Records): Person assigned responsibility within a Stennis organization for identification, maintenance and disposition of records in accordance with the Agency File Scheme record subject categories and the NASA Records Retention Schedule. Updates and maintains the Master Records Index listing.

Document History Log: A required part of all SSC procedural and instructional documents for maintaining a complete history of all changes and modifications to a document. All administrative and technical changes to a document must be annotated.

Document Manager: Person having overall responsibility for the management and maintenance of a document. The Document Manager may or may not be the same person as the Creator or actual Owner. See also Creator, Owner, and Release Manager.

Instructional and Procedural Documentation (Documents): All NASA/SSC policies, instructions, and procedures that are specific and/or essential to performance of NASA/SSC functions, services and operations and which shall remain in place and effect until revised or cancelled regardless of the preparing or performing organization or contractor. Such

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documentation is considered the property of NASA/SSC and provides for the continuity of NASA/SSC business and operations.

ISO: Borrowed from the Greek word, *isos*, meaning "equal." It refers to the International Organization for Standardization, which was founded in 1946 to develop a common set of manufacturing, trade, and communication standards. Although this organization is commonly referred to as ISO, *ISO* technically is not an acronym for anything.

Keywords: An index entry that identifies a specific piece of information about a document. Keywords are used by search engines to find relevant information. Keywords are a form of metadata. Keywords are created and entered in the data entry process and are essential to support search and querying processes for documents and report generation activities from the document repository database. Some examples of keywords are: effective date, review date, and expiration date.

Master List: Listing of directives, work instructions, forms, etc. used to perform tasks. It contains the document's number and revision level.

Metadata: Metadata is entered and/or captured as part of the data entry process. Keywords are a form of metadata. Metadata is essential to, and supports search and querying processes for documents and report generation activities from the document repository database. Maintenance of correct metadata supports the document management process.

NASA Records Retention Schedules (NRRS): Official NASA descriptions of types of files and records and listing of retention and disposition requirements. (NPR 1441.1)

Office of Primary Responsibility (OPR): The organization having the primary responsibility for a process or procedure for the delivery of a product or service to the customer and, therefore, responsible for identifying which records need to be generated and placed under control and where they shall be maintained and stored.

Owner (Document): The person having responsibility for management of a document and uploading into the TechDoc system. For practical document management purposes, the Owner may be considered the *Point of Contact* who is knowledgeable of and manages the document's technical content and performance.

Quality: The totality of characteristics of an entity that bear on its ability to satisfy stated and implied needs.

Quality Record: A document or data item that furnishes objective evidence of activities performed or results achieved. A quality record substantiates the fulfillment of specific quality requirements or the effectiveness of the Management System's operation. Some of the purposes of quality records are demonstration, traceability, and preventive and corrective action. A quality record can be written or stored on any data medium.

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Management System: The organizational structure, procedures, processes, and resources needed to implement quality management. SSC has utilizes the principles, standards, and methodologies established by the International Organization for Standardization for its Management System.

Release Manager: Person responsible for the final review, entry of document information, and release of documents into the TechDoc System. May be the same as Document Creator and may or may not be the actual document owner or manager.

Requirement: A documented need for which compliance is mandatory.

Revision: Any change or modification to a document requiring update of the document to the highest next Revision level number.

Technical Change: Any corrective change or modification to a document that affects technical content. Technical changes are automatic revisions to the next revision level.

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APPENDIX B – STANDARD NUMBERING METHODOLGY AND SYSTEM

B.1 Introduction

The SDNS documentation numbering methodology is applicable to and for use on all SSC Directives (SPD's & SPR's), procedure, process, and work instruction type documents to be entered into the TechDoc System documentation repository. The numbering scheme and document entry into the TechDoc System may is also used for documents such as major plans, reports, and other informational documents with reference and retrieval value to the SSC mission and operations. Reference Appendix C, Technical Documentation System (TechDoc) for instruction in the use and rules for documents being entered into SSC's TechDoc system.

The SDNS is specifically to be used for those documents directly describing the policy, actions, and work activities necessary to accomplish SSC requirements and objectives. It also applies to NASA/SSC scientific and technical information (STI) publications and educational publications.

The SDNS and its numbering methodology does not apply to Contractor corporate/proprietary and internal management instructions or to reference, evidentiary, or artifactual materials already possessing unique numbering structures or for which other unique numbering must be used for subjective purposes. If Contractors desire to publish their management instructions in the TechDoc System, their own numbering methodology must be used. The use or development of special numbering methodologies for all documentation to be published in the TechDoc System must be coordinated with the SSC TechDoc System administrators.

SSC personnel preparing educational type publications and materials for public use should use the publication number link in SDNS for assignment of these special document numbers. Use of SDNS for assignment of numbers for certain document types such as Directives and Agreements is restricted to specific authorized personnel.

B.2 Standard Document Numbering System (SDNS)

The SDNS is an automated web-based application that assigns and tracks numbers for SSC documentation. By supplying a document type, AFS Number, title, and requestor of the document, the SDNS application will generate the number to be assigned to the document. SDNS also allows the user to request a report from the database for a list of documents contained in the database by category. Options to *Request Document Number*, generate *Document Report*, or perform *Administration* are provided on the main SDNS window. Clicking an option will take a user to the appropriate window for performance. The *Administration* option is reserved for use of database administrators only.

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Abbreviated help information and instructions on using the SDNS to issue document numbers is available by selecting the *HELP* button at the bottom of the SDNS *REQUEST DOCUMENT NUMBER* window.

B.3 Number Structure

The standardized numbering methodology considers and incorporates:

- Center Identification and methodology for identifying documents by type of instruction or information (e.g., Directive, Work Instruction, Plan, etc.).
- Agency File Scheme (AFS) Subject Numbers as defined in NPR 1441.1 Appendix D.
- Existing numbering methodology used for NASA Directives per NPR 1441.1.
- Consecutive number assignment within each type of document.
- Other unique identifier requirements.

The number is composed of five required fields in a four-field format separated by hyphens:

Field 1 & 2		Field 3		Field 4	Field 5
Center & Type	-	AFS#	-	Sequential No.	Unique ID

Examples:

- SPR 2810.1 (Stennis Procedural Requirements AFS 2810 [IT Security]. Document # 1 in this series. Note: Only directives are numbered in this particular manner).
- SWI-1410-0001 (Stennis Work Instruction AFS 1410 [Directives Management] No. 1 in series).
- SMP-8830-0005 (Stennis Management Procedure AFS 8830 [Maintenance, Repair, & Operation of Facilities] No. 5 in series).
- SPLN-1740-0001 (Stennis Plan AFS 1740 [Safety] No. 1 in series).
- SOI-8080-0004 (Stennis Organizational Instruction AFS 8080 [Tests & Testing] No. 4 in series).
- SSTD-8070-0043-PIPE (Stennis Technical Standard AFS 8070 [Technical Standards & Specifications] No. 43 in series specific to Piping).
- SSOP-8830-0005-TEOHPG (Stennis Standard Operating Procedure AFS 8830 [Maintenance, Repair, & Operation of Facilities] No. 5 in series specific to High Pressure Gas).

In addition to Directives and SSC procedures, the numbering methodology allows users to use the TechDoc system to store for ready retrieval many additional types of information resources of benefit and use across the facility (i.e., unique plans and reports, mission and capability statements, etc.) For example: "E-1 Activation Safety Review Team Meeting Minutes."

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The document is numbered: SREF-8080-0001 (Stennis Reference – AFS 8080 [Tests & Testing] – No. 1 in series).

B.3.1 Fields 1 & 2 – Center Identification and Document Type

Fields 1 and 2 are combined and uniquely identify the Center (Field 1) and the type or category of instruction provided by the document (Field 2). The first field *Center* will always be an "S" denoting Stennis Space Center. SDNS automatically assigns the "S" notation. No user input is required.

The second field *Type* is a two or three character abbreviation determined by standard type definitions that categorize and identify the document by the type of information or instruction provided.

The SDNS provides a pull-down menu for selection of the appropriate document *Type*. Users should choose the *Type* that best fits the information provided by or the function of their document. Document *Type* is also one of the search and retrieval query capabilities of the TechDoc System. Accurate and consistent *Type* categorization of documents is essential to maintaining SDNS and TechDoc system data and providing accurate and complete search and retrieval results to user queries. The document *Type* definitions and accepted abbreviations for assigning numbers from the SDNS and also categorizing documents in TechDoc are listed in Table B-1. Note that TechDoc also utilizes other additional document types for categorization of those documents that employ other numbering methodologies. A list of additional TechDoc document types is provided in Appendix C.

Note: Additional SDNS and TechDoc types and abbreviations may be added to fulfill future expansion requirements. New *Type* Categories may be added by contacting the TechDoc System Administrator. Also contact the TechDoc System Administrator for information about using any *Type* Categories not appearing in the lists provided in this document.

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 $Table\ B-1-SSC\ SDNS/TechDoc\ Document\ Types\ and\ Definitions$

DOCUMENT TYPE DEFINITIONS				
Type Category	SDNS Doc. Number Abbreviation	Description/Definition		
Administration	ADM	Administrative documentation: Meeting Minutes, Agendas, Memos, etc.		
Agreements	SAA	Space Act Agreements: All types of SSC Legal Agreements. Restricted; contact the Records and Documentation Management Office (RDMO).		
Charter	BCC	Boards, Councils, and Committees. Formally impaneled group established to perform a specific Center function.		
Directives (DIR)	PD, PR	Defined as Stennis Policy Directive (SPD) and Stennis Procedural Requirements (SPR – formerly Stennis Procedures and Guidelines/SPG). Category reserved for NASA/SSC Directives only. Restricted; contact the SSC Records and Documentation Management Office (RDMO).		
Discrepancy * Correction Record (DCR)	DCR	Discrepancy & Correction Record.		
Discrepancy Report (DR)	DR	A document utilized to identify and correct discrepancy with test systems. The intended uses of a DR are to troubleshoot, repair, and re-test non-conforming systems so as to return them to the proper configuration. Documents nature and disposition of non-conforming material, article or part. (Consult Administrator before using)		
Engineering Drawing (ED)	ED	Not currently being entered. Reserved for future use.		
Maintenance Instruction (MI)	MI	Provides routine inspection, maintenance, test and/or rework instructions, processes, or procedures for recurring or cyclic activities specific to hardware components and systems.		
Management Procedure (MP)	MP	Provides administrative and or general operational instructions or procedures for a corporate entity (NASA or Contractor), department, or section.		
Organization Instruction (OI)	OI	Provides procedures and instructions for internal use within an organization. Contains administrative "WHAT To" and operational "HOW To." Restricted; specific to operational activities for Propulsion Testing.		

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DOCUMENT TYPE DEFINITIONS				
Type Category	SDNS Doc. Number Abbreviation	Description/Definition		
Plan	PLN	Specifies what will be done, when and by whom. Plans may provide specific start and completion dates. May or may not include detailed 'how' work will be performed. Types of Plans may include contract deliverables as well as area plans; i.e., security, safety, and quality.		
Process Plan (PP)	PP	Unique documents defining a process for a given specific activity, one-time occurrence. Note: this Type may utilize SDNS numbers or other unique numbers in TechDoc. Coordinate use of this Type through the TechDoc Administrator.		
Presentation (PPT)	PPT	All types of presentations and briefings (may be PowerPoint® or other formats).		
Project Requirements Document (PRD)	PRD	Requirements for test article support through all phases of facility preparation, operations, and test readiness/support. A PRD may be developed in phases which become the basis for supporting SSC facility and operability preparation as well as developing data until all phases are complete.		
Quality Procedure (QP)	QP	Provides procedures and instructions specific to quality assurance, e.g. products, documents, records, plans, etc.		
Reference (REF)	REF	Various types of reference documentation (Reference Manuals, User Guides, Handbooks etc.).		
Report (REP)	REP	Usually a text document providing an explanation of a technical or business situation.		
Safety Procedure (SP)	SP	Provides procedures and requirements specific to safety, e.g. task performance, equipment, process requirements, OSHA, etc.		
Scientific & Technical Information (STI)	STI	Reserved for official STI publications only. NASA STI is defined as the results (facts, analyses, and conclusions) of the Agency's basic and applied scientific, technical, and related engineering research and development. STI also includes management, industrial, and economic information relevant to this research. Examples include, but are not limited to, technical papers and reports, journal articles, meeting, workshop, and conference papers; and presentations, conference proceedings, preliminary or non-		

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DOCUMENT TYPE DEFINITIONS				
Type	SDNS Doc.	Description/Definition		
Category	Number			
	Abbreviation	11: 1 10TY: 1 1: 04 1 1 4 : 111		
		published STI, including any of these examples that will be posted to a public website		
Specification (SPC)	SPC	Specifies requirements to be followed for modification of a SSC facility.		
Specification Control Drawing (SCD)	SCD	Provides specifications of a particular part or item for procurements.		
Standards (STD)	STD or TS	Standards (STD) or Technical Standard (TS) provide authoritative instruction to prescribe, ensure, or certify the quality of the end result, for given processes, products, designs, procedures, etc., that are unique to SSC.		
Standard Operating Procedure (SOP)	SOP	Provides instruction for regularly performed routine tasks by trained and/or certified personnel on a system or equipment.		
Technical Procedures (TP)	TI, TP, or TPI	Technical Procedures (TP), Technical Procedures & Instructions (TPI) or Test Instructions (TI) provide procedures relating to a technical or scientific process or methodology used by trained and/or certified technical or laboratory personnel. Typically performed in a bench or laboratory environment.		
Work Instructions (WI)	WI or CWI	Delineates detailed activities for accomplishing a specific task or a set of closely related tasks needed to ensure consistent working methods and quality of output (includes Desk Guides). WI applies where Work Instructions (WI) are specifically applicable to single individual areas or across several organizations with a joint work objective. Common Work Instructions (CWI) are used when the instructions have broader Centerwide applicability.		

B.3.2 Field 3 – Agency Filing Scheme (AFS) Number

The SDNS utilizes the AFS as part of the SSC document numbering methodology to aid in categorizing instructions by subject and to help facilitate records management. The AFS is an established set of NASA numbering codes utilized for categorizing management information and records by subject areas. NASA Directives are numbered according to the AFS code to which

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the Directive subject matter pertains. Records are also filed and managed in accordance with the AFS and associated Records Retention Schedules.

All SSC documentation falls into one of the established subject codes of the AFS. SDNS users must select an AFS code as part of the number for their document. Use of the AFS number in most cases will be sufficient to tie a procedure to a functional requirement or area.

The SDNS provides a direct link to the AFS subject codes for reference and determination of the appropriate AFS code. SDNS users should consult with their organizational Records Custodian or a SDNS Database Administrator for assistance in identifying the appropriate AFS subject code for their document if they are unfamiliar with the AFS. If an appropriate AFS code is not identifiable or is unavailable from the existing AFS listing, contact the NASA/SSC Records and Documentation Management Office or a SDNS Database Administrator to determine and/or add a code to the system.

For further reference, the AFS is contained in Appendix D of NPR 1441.1, Records Retention Schedules located in the NASA Online Directives Information System (NODIS). Access to NODIS is provided on the SSC Intranet under Reference Documentation, Policies & Procedures.

If an invalid AFS number is entered in the SDNS, the SDNS provides an error message to enter a different number. If a desired AFS number is not in the SDNS, the SDNS provides a message to contact the NASA/SSC Records Manager or a SDNS Database Administrator for assistance.

B.3.3 Field 4 – Sequential Number

The fourth field is a four digit (except for SPDs and SPRs) *Sequential Number* issued by the SDNS database. Each document within a particular *Type* category and *AFS* subject area will be issued numbers in sequence beginning with 0001 and going up with each new document added to that particular *Type* and *AFS*. No User input is required for this field.

Note: SPDs and SPRs are handled uniquely according to the established methods for numbering NASA/SSC Directives (e.g., 2810.1; 2540.2; etc.). All other documents will utilize the four-digit format sequential number.

B.3.4 Field 5 – Unique Area Identifier

The fifth field is an optional User entry field. It is not required and is not applicable to every *Type* of document for which a number may be requested. The optional field for *Unique Area Identifier* is used for areas such as the Engineering and Science Directorate (ESD) and other areas that require procedures to be individually distinguishable. For example, the ESD propulsion testing environment may have dozens of Standard Operating Procedures (*Type* - SOP) all falling within the same AFS subject area but pertaining to different areas of activity. The unique identifier allows further distinguishing of Test Engineering Operations, High Pressure

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Industrial Water procedures from those of Test Engineering Operations, High Pressure Gas and other groups for instance. The *Unique Area Identifier* is limited to seven characters. Examples:

- SSOP-8830-0001-TEOHIW.
- SSOP-8830-0002-TEOMS.
- SSOP-8830-0003-TEOHPG.

Unique Area Identifiers are reserved and pre-established in the system for use by organizations for very specific usage purposes. Designation and establishment of *Unique Area Identifiers* will be limited to those cases essential to the identification and/or differentiation of documents within an organization and an AFS code. Designating *Unique Area Identifiers* simply to identify documents for any given organization shall not be permitted. The TechDoc System provides other query and search mechanisms to satisfy this need.

If use of a *Unique Area Identifier* is desired and has not already been established, users should contact the SDNS Administrators for assistance in establishing and reserving the desired identifier code. Requests and assignment of a *Unique Area Identifier* will be addressed on a case-by-case basis.

B.4 About Revision Numbers

The SDNS does not issue or track document Version or Revision numbers. SDNS issues the basic document number only. Issuance, maintenance, and tracking of Revision numbers are the responsibility of the document owner as a part of the document preparation and revision process and TechDoc System entry.

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APPENDIX C – TECHNICAL DOCUMENTATION SYSTEM (TECHDOC)

C.1 Introduction

The TechDoc System is a distributed document management system with a design that allows for the management of <u>any document file type</u>. The TechDoc System features include:

- a. Upload and download of documents for creation, modification, review, and approval.
- b. Revision control of approved documents.
- c. Automated notification/distribution of new or revised documents to critical document users.
- d. Distribution/publication of released documents to the SSC/user community via common access interface.
- e. Full text search and retrieval of published documents.
- f. Electronic document routing for review and concurrence.
- g. Direct linking to the TechDoc System and/or its individual documents from other user developed World Wide Web pages.
- h. Structured organization and query of information by types, categories, functions, organizations, text, etc.
- i. Security functions to limit document access to authorized users when needed.

The system accepts documents created in various electronic formats and, upon entry, creates a PDF file acceptable for viewing with standard web browsers. Documents may be retrieved, viewed, and printed in either the native or PDF format but they cannot be altered in the viewing mode. Upon publication in the system, a watermark is created with the standard release statement: "*RELEASED – Printed documents may be obsolete; validate prior to use.*" This caution is issued on all document pages to ensure that user's are working to the latest version of the document. This function aids in satisfying an ISO requirement regarding control of documents.

SSC documents should be created and submitted in electronic format from software available on NASA/SSC standard desktops. The current acceptable electronic file formats are shown in Table C-1. Use and acceptance of other software and file formats will be considered on a case-by-case basis.

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Table C-1 – TechDoc Acceptable Electronic File Formats

Word Processing text	Microsoft [®] Word [®]
Spread Sheets	Microsoft [®] Excel [®]
Presentation Slides	Microsoft® Power Point®
Imbedded Images	PDF, GIF, BMP, TIF, or JPEG file

Document and information search capability includes, but is not necessarily limited to:

- Title
- Document Number
- Document Type (e.g., Directive, SOP, Work Instruction, Maintenance Instruction, etc.)
- Organization
- Point of Contact
- Keywords
- Text

C.2 Document Type Categorization Requirements

A document *Type* category descriptive of the document's purpose or use must be selected when entering a document into the system. Accurate and consistent *Type* categorization of documents is essential to maintaining SDNS and TechDoc system data and providing accurate and complete search and retrieval results to user queries.

A list of current approved SDNS/TechDoc document types and their definitions is provided in Appendix B, Table B-1. A list of additional TechDoc document types to be used for categorizing other classes of documents that do not necessarily use the SDNS numbering methodology is provided in Table C-2, below. Additional document types may be added by contacting the SSC TechDoc System administrators and will be considered on a case-by-case basis.

Table C-2 – SSC TechDoc Document Type Categorizations and Definitions

DOCUMENT TYPE DEFINITIONS		
Type Accepted Description/Definition		Description/Definition
Analysis	ANALYSIS	Design Analysis Report(s) and supporting documentation
Action Request	AR	Rocket Propulsion Test Management Board only
Calibration Data Report(CDR)	CDR	CDR Templates – Calibration Laboratory only

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DOCUMENT TYPE DEFINITIONS		
Type Category	Accepted Abbreviation	Description/Definition
Central Engineering Files (CEF) Vendor Info	CEF VENDOR INFO	CEF Vendor Information.
Deviation Waiver Variance Request (DWVR)	DWVR	Deviation Waiver and Variance Requests.
Engineering Modification Instruction (EMI)	EMI	Instructions and design modification requirements for facility infrastructure and hardware including drawings.
Fluid Component Processing Job Files (FCPF)	FCPF	Records documenting requirements and processes for cleaning and components and final certification.
Forms	FORM	A document with blanks for the insertion of details or information
Metrics	METRIC	A standard of measurement; a measurement of performance/quality.
Master Records Index (MRI)	MRI	Listing of all records holdings and required retentions for each SSC organization.
Material Safety Data Sheets (MSDS)	MSDS	Material Safety Data Sheets for all chemicals/chemical products approved for use at SSC. Environmental Office only.
Recertification of Technical Procedures	RECERT TP	Recertification of Technical Procedures.
Request for Engineering Support (RES)	RES	Request for Engineering Support.
Real Property Transaction Voucher (RPTV)	RPTV	Documentation on property asset management.
Sample and Analysis	SARR	Completed form SSC-173 – a sample report that verifies a system has been cleaned to the required "clean" level, or

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DOCUMENT TYPE DEFINITIONS		
Type Category	Accepted Abbreviation	Description/Definition
Request Report (SARR)		that contamination remains.
Stennis Contractor Transmittal Sheet (SCTS)	SCTS	Correspondence and documentation for the acquisition, specification, provision, and acceptance of hardware and components via contracts and vendors.
SORD Specification	SORD SPEC	Sitewide Operation Repair Documentation (SORD) is the NASA-Approved baseline drawings.
Study	STUDY	Study.
Stennis Work Request (SWR)	SWR	Authorized instrument employed to obtain the services of an on-site SSC contractor.

C.3 Document Sensitivity and Security

Some SSC documentation published in the TechDoc System may be considered sensitive for security, privacy, proprietary, technology export, or other reasons. Appropriate statements of the document's sensitivity should be marked on all pages of such documents. Specific information for determining sensitivity and requirements for marking documents are provided in NPR 1620.1 under the section for Sensitive But Unclassified Information (SBU).

Care must be exercised in the handling and posting of sensitive documents in TechDoc for reference access and update. A security feature that limits access to a selected list of TechDoc system users who are authorized access is provided by the TechDoc System to accommodate documents with sensitivity and security issues.

Document owners should follow all applicable guidelines in setting up a document to preclude general SSC or public access to information deemed sensitive. Contact the TechDoc administrators for training and assistance in activating and using the TechDoc security features.

Users of this system shall ensure that data added to the system is in accordance with United States export control laws and regulations, Homeland Security, and NASA policy. Relevant laws and regulations include the Export Administration Regulations (EAR), 15 CFR 730-774, and the International Traffic and Arms Regulations (ITAR) 22 CFR 120-130. Other relevant instruction regarding security of information and its marking and control is contained in NPR 1620.1. All document owners are required to attend ITAR training prior to having their user accounts activated.

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C.4 External Documents

External documents are documents <u>not</u> generated at SSC. Examples are industry specifications, Material Safety Data Sheets (MSDS), customer documents, NPD's, NPR's, and other government agency regulations. Some external documents may be entered in the TechDoc System. These documents will utilize their existing numbering as appropriate or may be issued an SSC document number from the SDNS under an appropriate document *Type* category.

C.5 Contractor-Owned Documentation

- a. Publication of contractor-owned documents (aka "Proprietary" documents) in the TechDoc System is at the contractor's discretion. The contractor shall be responsible for annotation of any such documents as proprietary, and their cancellation at contract end.
- b. All contractor-owned "Proprietary" documents published in the TechDoc System shall bear a prominent indication of some form on their front cover of this designation, either by the use of company logo and/or other annotations.

C.6 TechDoc Access

The TechDoc System is available to all SSC personnel for document search, retrieval, and viewing via standard browser from the SSC Intranet under the "Reference Library" tab, "Policies & Procedures." TechDoc documents may also be accessed from the ISO web page. The TechDoc query page provides options and pull-down menus for user queries. Access to presorted documents by responsible organization and function is provided on the ISO web page.

To create and manage documents in the system, users must have an account, including user ID and password, and receive user training. User accounts shall be established via the TechDoc User Account Request form (SSC-738A) available on the SSC Electronic Forms Index and submitted to the SSC TechDoc System Administrators. User training shall be scheduled at the time the User Account and ID are established

When requesting an account, requestors must specify the type of account required: Document Creator, Release Manager, or Guest (Read Only). The Document Creator places new or revised documents into TechDoc; the Release Manager is responsible for the final review and official release of the document into the system for use; and Guest is a Read Only account. The Document Creator and the Release Manager may be one and the same, but are frequently performed as separate functions and responsibilities. For the purposes of TechDoc, the Document Creator is considered to be the author and owner (although they may not be in actuality), while the Release Manager is considered to be the Document Manager (although not necessarily the document's technical Point of Contact).

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The Release Manager is responsible for ensuring the correct population of information in the TechDoc system and for ensuring the Association of Access and Notification lists and Keywords as needed. Release Managers are urged to utilize a final review process and checklist when releasing a document to the system. An optional form (SSC-738, TechDoc System Documentation Release Checklist) is available on the SSC Intranet for this purpose. Document Creators and Release Managers are cautioned that all information entered in the TechDoc System must match exactly with that contained in the document. Typographical errors, misspellings, and inconsistent entries may render search and retrieval efforts ineffective.

C.7 Document Creation and Modification Process

The document creation and/or modification process is illustrated in Figure C-1. Complete instruction for using the TechDoc System is available in the TechDoc System User's Guide which may be obtained from the TechDoc System administrators or is available online via browser in the TechDoc System.

C.8 Document History and Cancellations

The TechDoc System retains a complete history of all document transactions. The history reflects the status of on-going document changes during the modification process (generations) as well as all Revisions including the most current version. This feature is important not only to tracking status in the modification and review process but also to the document's overall and complete history for audit and investigation purposes. Prior versions of a document may be retrieved should the need arise.

Cancellation (CANCEL) is treated as a revision level for purposes of maintaining the document history. Cancellation pages are actually revised documents that replace the existing version of the document being cancelled.

On occasion, the processes or procedures contained in a cancelled document may need to be reinstated. The TechDoc *Cancel* process and history allows the retrieval and reinstatement of the older document along with its established document number.

Documents may be deleted from the system only through an administrative process. Since deletions permanently remove any and all history of the document, any requirements for deletion of documents must be carefully considered and justified.

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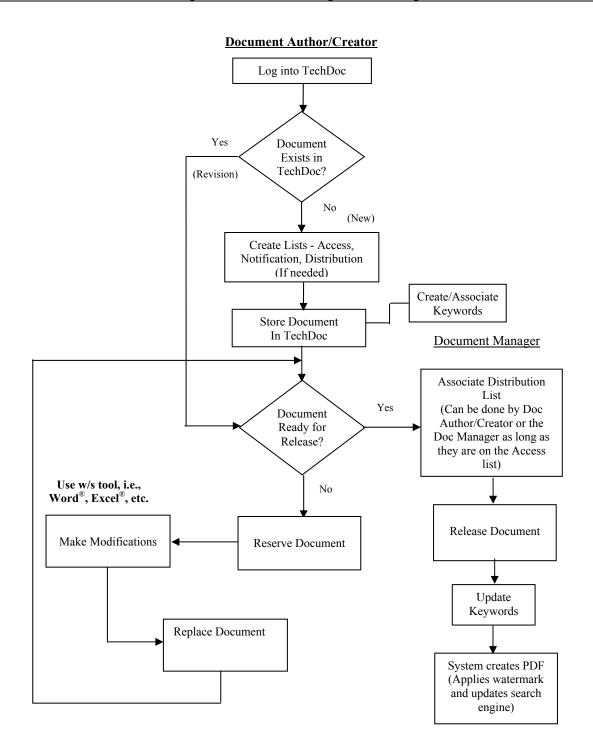


Figure C-1 – Document Creation/Modification Flow Process

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APPENDIX D – BASIC WRITING AND COMPOSITION GUIDELINES

The following basic writing tips and practices are provided to aid in composing and preparing SSC documents. Recommended sources for additional guidance in writing and composition can be found in NASA SP-7084, *Grammar, Punctuation, and Capitalization, A Handbook for Technical Writers and Editors*, and *The Gregg Reference Manual*.

- **D.1** The Paperwork Reduction Act stresses not to include instructions if the information, instruction, or material is sufficiently described in other documents or instructions to perform what is required; i.e., in preparing documentation don't simply repeat what's been described elsewhere those instructions or information can be cross-referenced when the source is valid and the information is readily accessible.
- **D.2** Documents do not necessarily have to be lengthy to be effective. Keep it as simple as practicable. Don't "over document."
- **D.3** Flowchart a process, if possible and appropriate. Make extensive use of charts and tables.
- **D.4** Use and follow a standardized format.
- **D.5** Keep the audience in mind.
- **D.6** In general, write in complete sentences with a subject and a verb. Don't try to take shortcuts.
 - Make the meaning very clear; have someone else read it and explain back what was said.
 - Check grammar make text grammatically correct.
 - Check spelling and punctuation.
 - Avoid the use of jargon.
 - Separate ideas into individual sentences or paragraphs, or sections.
- **D.7** Don't go too deep with the numbering level (e.g., 1.1.1.1) keep it to three to four levels maximum. If it's worth breaking out at a deep level then perhaps restructuring at a higher level is warranted.
- **D.8** Remember outlining rules when there's a "1," there should be a "2"; an "a," there should be a "b."
- **D.9** Write to the task, not an individual. Documents are written to help workers perform their tasks more efficiently and consistently. For every task, identify:
- Who is responsible for making sure it gets done.

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- Standards to be met/completion criteria.
- What resources are needed to accomplish the task or requirement.
- What records must be kept.
- What to do if it doesn't work.
- **D.10** Pretest procedures. Try them and get feedback.
- **D.11** Prepare and use a document review process and checklist.